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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/624,799

07/22/2003

Francis P. Morana

18034 (AT 20958-02110)

7466

7590

06/30/2004

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EXAMINER

DINH, PHUONG K

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,799	MORANA ET AL.	
	Examiner	Art Unit	
	Phuong KT Dinh	2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
2. Specification, page 7, line 20, "a projection 90" should be changed to - - a projection 94 - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Chiu (U. S. Patent 6,454,461).

Regarding claims 1-4 and 6, Chiu discloses a low profile contact comprising: figures 1 and 2 portion 300, 320, 320 form a U- shaped spring and beams extending from edges of the spring portion 332 are upstanding guides.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu.

Regarding claim 5, Chiu discloses the claimed invention except for at least one of said first and second contact beams adapted to communicate with a solder ball. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solder balls so as to provide reliable strong connector.

Regarding claim 7, Chiu discloses the claimed invention except for said profile dimension being less than about 2mm between said tip and said lower edge. It would have been obvious to one of ordinary skill in the art at the time the invention was made the profile dimension being less than about 2mm between the tip and the lower edge, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

7. Claims 8-15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fedder (U. S. Patent 4,975,069) in view of Youngfleish (U. S. Patent 5,224,885)

Regarding claims 15, 17-20, Fedder discloses a housing 12; and at least one contact situated within said housing, said contact comprising: a curved resilient spring portion 38, and a first contact beam and a second contact beam extending from opposite ends of said spring portion, said first contact beam and said second contact beam extending along a longitudinal axis, at least one of said distal end portions comprising an upstanding guide surface 52 configured to receive and align a connection

pin inserted between said first and second contact beams along an insertion axis substantially perpendicular to said longitudinal axis. Fedder discloses the claimed invention except for a low profile connector. Youngfleish discloses a low profile connector. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fedder to provide a low profile connector as taught by Youngfleish so as to provide smaller size connector.

Regarding claim 19, Fedder and Youngfleish disclose the claimed invention except for said first and second contacts include at least one projection configured to contact a solder ball. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solder balls so as to provide reliable strong connector. For claims 8-14, Fedder figures 6A, 6B discloses contacts 152 in nested configuration.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fedder (U. S. Patent 4,975,069) in view of Youngfleish (U. S. Patent 5,224,885) and further in view of Barkus (U. S. Patent 4,966,557).

Regarding claim 16, Fedder and Youngfleish disclose the claimed invention except for said first contact beam in a stationary position relative to said housing while permitting said second contact beam to deflect when a pin is inserted between said contact beams along said insertion axis. Barkus, see figure 5, discloses a stationary position relative to the housing while permitting the second contact beam to deflect when a pin is inserted between the contact beams along the insertion axis spring 30, beam on left is stationary. Therefore, it would have been obvious to one of ordinary skill

in the art at the time the invention was made to modify Fedder and Youngfleish to provide the stationary position as taught by Barkus so as to provide smaller connector.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong KT Dinh whose telephone number is 571-272-2090. The examiner can normally be reached on 8 -5, 5 days a week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Field can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phuong Dinh
June 21, 2004.